

Applicant : David B. Watson, et al.  
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Amendments to the Claims:

Please cancel claims 1, 18-26, 32-35. Please amend claims 4, 8, 9, 12, 27 and 31 as indicated below.

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently amended) The system of Claim 1 further including a source of heat used to preheat the supply of pressurized gas.
3. (Original) The system of Claim 2 wherein the source of heat comes from recovered waste heat from reciprocating engine(s) driving at least one secondary electric generator.
4. (Currently amended) ~~The system of Claim 2 wherein the source of heat comes from recovered waste heat from~~ A system for increasing overall fuel efficiency of a facility comprising:
  - a gas expansion engine for receiving a supply of pressurized natural gas from a natural gas pipeline, said expansion engine having a rotatable shaft as an energy output;
  - an electric generator coupled to said rotatable shaft of said expansion engine for the purposes of generating electricity;
  - a gas fired turbine engine(s) driving at least one secondary electric generator, said gas fired turbine engine(s) adapted to preheat the supply of pressurized gas; and
  - said system adapted to direct at least a portion of reduced pressure gas from an outlet of the expansion engine to a gas consuming device.

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5. (Previously presented) The system of Claim 2 wherein the source of heat comes from recovered waste heat from a plant's process via a heat exchanger.

6. (Original) The system of Claim 2 wherein the source of heat comes from a boiler feed water condenser.

7. (Original) The system of Claim 2 wherein the source of heat is recovered waste heat from flue gas from one or more pieces of fired process equipment.

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8. (Currently amended) ~~The system of claim 1~~ A system for increasing overall fuel efficiency of a facility comprising:

a gas expansion engine for receiving a supply of pressurized natural gas from a natural gas pipeline, said expansion engine having a rotatable shaft as an energy output;

an electric generator coupled to said rotatable shaft of said expansion engine for the purposes of generating electricity;

said system adapted to direct at least a portion of reduced pressure gas from an outlet of the expansion engine to a gas consuming device; and wherein the gas expansion engine is a piston type expansion engine.

9. (Currently amended) The system of claim 1 ~~4~~ wherein the gas expansion engine is a turbo expander type expansion engine.

10. (Canceled)

11. (Canceled)

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12. (Currently amended) A system for increasing overall fuel efficiency comprising:  
a reciprocating type gas expansion engine for receiving a supply of pressurized natural gas from a natural gas pipeline, said gas expansion engine having a rotatable shaft as an energy output;

an electric generator coupled to said rotatable shaft of said expander engine; and

a municipality gas distribution network for distributing at least a portion of tail gas from the gas expansion engine.

13. (Original) The system of Claim 12 wherein the gas distribution network is a distribution system located downstream of a pressurized municipality gas supply gate.

14. (Original) The system of Claim 12 wherein the expansion engine and the electric generator are preassembled and installed as a single unit.

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15. (Original) A system for increasing overall fuel efficiency of an electric power generating plant comprising:

a gas expansion engine for receiving a supply of pressurized gas, said expansion engine having a rotatable shaft as an energy output;

a first electric generator coupled to said rotatable shaft of said expansion engine;

at least one boiler supplied with at least a portion of fuel gas that has been lowered in pressure by running the supply of pressurized gas through the gas expansion engine; and

a second generator driven by a steam turbine using steam from said at least one boiler.

16. (Original) The system of Claim 15 wherein the expansion engine and the first electric generator are preassembled as a single unit and installed as a single unit.

17. (Original) The system of claim 15 wherein the gas expansion engine and electric generator are mounted on a skid for reduced installation time.

18.-26. (Canceled)

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27. (Currently amended) A method of increasing fuel efficiency comprising:  
providing a supply of pressurized natural gas from a natural gas pipeline to an inlet of a reciprocating type gas expansion engine;  
preheating the supply of pressurized gas;  
directing at least a portion of lower pressure gas from an outlet of the gas expansion engine to a gas consuming device;  
generating a rotational force as an energy output from said gas expansion engine;  
coupling said rotational force to an electric generator; and  
generating electric power using said electrical generator.

28. (Canceled)

29. (Original) The method of claim 27 further including the steps of:  
using at least a portion of the lower pressure gas from the outlet of the gas expansion engine as fuel for an engine driving a second generator.

30. (Original) The method of claim 27 further including the step of using at least a portion of the lower pressure gas from the outlet of the gas expansion engine as fuel for a boiler.

31. (Currently amended) A The method of increasing fuel efficiency of claim 27 further comprising:

~~providing a supply of pressurized natural gas to an inlet of a gas expansion engine;~~  
directing at least a portion of lower pressure natural gas from the outlet of the gas expansion engine to a gas distribution network for a municipality.

32.-35. (Canceled)